Some Florida Fungi

By F. S. Earle

I have recently had the pleasure of examining two small lots of Florida fungi. The larger one was collected by P. H. Rolfs, and the smaller by S. M. Tracy. The following seem to be either new or noteworthy :

Asterina sabalicola sp. nov.

Mycelium widely effused, consisting of branching and anastomosing, septate, somewhat nodular and irregular, brownish hyphae from 3–5 μ in diameter : pseudo-perithecia 100–150 μ, formed by radiating septate hyphae about 3 μ in diameter, the free ends of which form a sterile fringe or subiculum, cells of these perithecial hyphae about 6 μ long : asci ovate, thin-walled, rather persistent, about 60 × 25 μ : ascospores sub-biseriate, oval, hyaline or faintly olivaceous, about equally uniseptate, 20 × 8 μ.

On living leaves of *Sabal* sp. Florida. P. H. Rolfs, no. 4.

The genus *Asterella* was proposed by Saccardo for the species of *Asterina* with hyaline spores, and it is recognized by Lindau (Engler & Prantl, **1**[1]: 340). It is possible that this species should be referred to the latter genus. The ascospores are, however, unmistakably tinted, and in older specimens it is probable that the color would be darker. This character at best is a very slender one for generic distinction when taken alone, and in this case the name *Asterella* is preoccupied by a genus of the Hepaticae, and is, therefore, untenable.

This is very different from the so-called *Asterina inquinans* E. & E. (N. A. F., no. 1785). The latter has no visible mycelium, and the naked sub-carbonaceous black perithecia are thickly scattered over the surface of the leaf. The ascospores seem to be uniformly continuous (Ellis says "faintly uniseptate ?") and hyaline or very faintly tinted. These characters would place it in the genus *Myiocopron* not in *Asterina* in which as now understood there is a superficial mycelium.

Ophiodothis atramentosa (B. & C.) Earle, nom. nov.

Hypocrea astramentosa B. & C. Jour. Linn. Soc. **10**: 377. 1868.

Epichloë Hypoxylon Peck, Reg. Rep. **27**: 108. D. 1875.

Dothidea vorax B. & C. Grevillea, **4**: 105. Mh. 1876.

Dothidea atramentaria B. & C. Grevillea, **4**: 105. Mh. 1876.

Ophiodothis vorax Sacc. Syll. Fung. **2**: 652. Je. 1883.

Dothichloë Hypoxylon Atk. Bull. Torr. Club, **21**: 223. My. 1894.

I refer here as being typical of this much named species, Rolf's no. 22, on an unknown grass from Lake City, Florida, Oct., 1896.

The stroma is crust like, often 2.3 cm. long and is slightly roughened throughout by the small, numerous, slightly papillate osteola.

A word is perhaps necessary in regard to the selection of the above name for this species. *Hypocrea atramentosa* B. & C. seems to have been founded on material from both Cuba and Alabama. There can be little question but that the Alabama material at least represented the same species that was later described as *Epichloë Hypoxylon* Peck and *Dothidea vorax* B. & C. If it should prove that the Cuban material differs from Peck's a specific name would have to be adopted for the form found in the United States. Atkinson's proposed genus *Dothichloë* has not been recognized by either Saccardo (Hedwigia, **35**: 34), nor by Lindau (Engler & Prantl. Nat. Pflanzfam.). The characters by which he seeks to separate it from *Ophiodothis* seem rather slight and even if, as he suggests, the character of the stroma of such species as *O. Haydeni* (B. & C.) Sacc. are sufficiently different to constitute a good generic distinction, the name *Ophiodothis* would, according to the method of generic types, now happily being somewhat widely recognized, have to remain with the present species, as it is the first one mentioned under this generic name. *Dothidea atramentaria* B. & C. and *D. pilulaeformis* B. & C. are recognized as varieties of this species by Saccardo. In the case of the former (see Rav. Fung. Amer. no. 100) there seems to be nothing on which to base a varietal distinction and it is therefore here included as a synonym. The latter (see Tracy's no. 167 on

Uniola, Ocean Springs, Mississippi, Sept., 1889) is quite distinct and is well worthy of varietal if indeed not of specific rank. The stroma is short, normally 1–2 mm. long (by confluence 1 cm. or more) but very much thickened, often seeming nearly globular. The perithecial cavities and osteola are much as in the type. The name for this latter fungus may be tentatively written as *Ophiodothis atramentosa pilulaeformis* (B. & C.).

Ophiodothis atramentosa Aristidae (Atk.)

Dothichloe Aristidae Atk. Bull. Torr. Club, **21**: 24.

On an unknown grass (probably *Aristida*), Lake City, Fla., June, 1895. P. H. Rolfs, no. 44.

This was given specific rank by Atkinson, and perhaps justly so, but as the following variety is intermediate in character between this and the type it seems best, for the present, to consider all of these forms as varieties, especially as they are so closely alike in their ascospores and asci. The distinguishing features of this form are the rongher more prominent ostioles and the interrupted or broken character of the fertile part of the stroma.

Ophiodothis atramentosa Cyperi var. nov.

Stroma interrupted, being formed of a thin sterile and of elevated fertile portions, the fertile tracts 1–2 mm. long by half as wide, perithecial cavities and ostioles as in the type.

On culms, leaves and bracts of *Cyperus ovularis*, Sneed's Island, Fla., Sept., 1899. S. M. Tracy, no. 6496.

DICHAENA STRUMOSA Fr.

On twigs of *Quercus*, St. Petersburg, Fla., July, 1894. P. H. Rolfs, no. 33.

This seems to be the first time that this interesting fungus has been taken with well-developed asci and ascospores; at least no description of these bodies has been published. The conidial form was distributed by Ellis, from New Jersey, as N. A. F. no. 3332. The Florida material agrees closely with this in the character of the distortions produced on the host and in general appearance, though the conidia seem slightly larger and broader. This conidial stage is referable to the form genus *Psilospora*, but it seems never to have been given a specific name under that genus.

I note the following characters from the Florida specimens:

Causing wart-like, often confluent distortions, 1 cm. in diameter. perithecia densely gregarious, innate-erumpent, black, carbonaceous, often flexed or irregular from crowding, lips somewhat widely open, about 1 × ⅓ mm.: conidia-bearing perithecia smaller and less distinctly hysteriform: conidia obovate, continuous, granular, hyaline to brownish, 28–30 × 12 μ: conidiophores about 20 × 4 μ, straight and stiff: asci nearly sessile, broadly oval, thin walled, 80–120 × 20–25 μ, paraphyses numerous, crowded, simple, the tips forming a brownish epithecium, about 120 × 3 μ: ascospores inordinate or partially biserrate, oval, continuous, minutely granular, light brown, closely packed in the ascus and often somewhat distorted by mutual pressure, 20–25 × 16–18 μ.

Lembosia camphorae sp. nov.

Epiphyllous: spots orbicular, nearly black with a narrow brownish border, 3–5 mm., in diameter, rarely confluent: perithecia thickly scattered over the central portion of the spot, often by confluence forming considerable crusts, single perithecia elongate, straight or slightly flexed, rather flat not prominent, lips somewhat widely open, averaging about 500 × 100 μ, surrounded by a rather scanty subiculum of slender occasionally septata, flexuous, anastamosing, brown threads about 3 μ, in diameter, the subiculum reaching 100 μ, in width: asci broadly oval, thin-walled, 8-spored, about 25 × 20 μ: ascospores inordinate, oval, slightly curved, about equally uniseptate, conspicuously constricted, ends subacute, faintly olivaceous, becoming light brown at full maturity, about 18 × 6 μ.

On living leaves of *Camphora officinalis*, Florida. P. H. Rolfs, no. 32.

Leptothyrium? carbonaceum sp. nov.

Amphigenous but mostly epiphyllous, not spotting or discoloring the leaf: perithecia irregularly scattered, large, about 1 mm., black, shining, carbonaceous, not distinctly parenchymatous, scutellate, central fertile portion strongly elevated, with a minute, central papillate imperforate osteolum, bordered by a flat sterile margin, often confluent, two or three together: sporules numerous, irregularly oval, yellowish, continuous, rather thick-walled, about 16–20 × 8–10 μ.

On unknown living coriaceous leaf. Lemon City, Fla., Feb., 1898. P. H. Rolfs, no. 39.

This conspicuous fungus is doubtless the immature stage of some species of the Microthyriaceae. It has little in common with the minute membranous species usually referred to *Leptothyrium*.